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Quantity Theory of Money:

Classical Approach or; Theory of Price level.

Several versions of classical Quantity Theory of Money are popular. One version also known as transactions version. It is called Fisher Equation of Equation.

The classical economist based their analysis of prices on the quantity theory of Money.

This theory basically gives the answer of how price level of any commodity is determined in an economy and why does price level changes in an economy.

The quantity theory of Money states that the level of Prices is directly related to the quantity of Money (M) in the economy.

Their position can be demonstrated using the equation of exchange:

$$MV = PY$$

where V = The velocity of circulation,

P = The Price Index

Y = Real National Income expressed in the prices of the base year.

The classical economists assumed that V and Y were not affected by changes in the money supply and could thus be regarded as; Constants.

$$P = f(M)$$

Increases in the money supply simply lead to inflation.

The various version's of the quantity theory of Money are attemps at explaining the causes of changes in the value of Money.

Quantity Theory of Money

(1) Classical Approach

(A) Fisher's View (Cash Transaction)

(B) Cambridge View (Cash Balance)

(2) Keynesian Approach

(1) Fisher's Transaction:

Prof. Irving Fisher has expressed the relationship between the quantity of Money and its value in the form of a formula which he calls the equation of Exchange.

The value of Money is determined at that point where demand for Money = Supply of Money.

Explanation:

$$P = \frac{MV + M'V'}{T}$$

Here; P = Price level

or; P = The value of Money

T = Transactions to be Performed by Money

M = Quantity of Money

M' = Credit Money

V = Velocity of Circulation of Money

V' = Velocity of Circulation of Credit Money

This formula equates the supply of Money to the demand for it.

Price level multiplied by the transaction(s) gives the ~~total~~ value of transaction(s) which means demand for Money (PT). This is equal to the supply of Money which consists of Cash and Credit in with their velocity of Circulation ($MV + M'V'$)

Thus; $PT = MV + M'V'$

$$P = \frac{MV + M'V'}{T}$$

Fisher's Contends that, in the short period T, V, V' remain Constant.

The proportion of M' to M also remain Constant. Therefore, P Varies directly with M. In other words; 1/p (Value of Money) Varies inversely with M or; Quantity of Money in Circulation.

Assumption:

(1) Constant Velocity of Money;
(2) Full Employment;
(3) Constant Volume of Trade transactions;
(4) Money is only a Medium of exchange;
(5) Constant Relation between M and M';
(6) Long Period;

The Cambridge Approach:

In the classical view, money is supposed as a Medium of Exchange which provides the Possibility of obtaining commodities for people; thus, it has no utility itself. In the other word, Money is not a good and hence the demand for Money is neglected in the classical viewpoint. The Cambridge approach economists have varied view concerning the above mentioned topic.

Fisher's Quantity Theory; relies entirely on the idea of a Stable transactions demand for Money. This requires that Money is desired only for its medium of exchange function.

An alteration on this point was brought by several Cambridge economist(s) in early part of 20th Century.

In particular, A.C. Pigou (1917), Alfred Marshall (1923), D.H. Robertson (1922) and John Maynard Keynes (1923).

These were the joint Creators of what has since become known as the "Cambridge Cash balance" approach.

The Neo-classic Theory:

The Neo-classical economic Viewpoint is based on Benefit or; Utility and formed into the microeconomic framework.

Its Monetary theory formed on two pillars:

Irving Fisher's transaction velocity; Marshall's & Walras

Cash balances approach.

The Neo-classic Quantity Theory of Money Could be written as;

$$M.V + M'V' = P.T$$

where M is money, V is Velocity Circulation of this money, M' deposits, V Velocity with response to M', P is price level, and T is total transactions.

(1) Marshall's Equation:

The Marshallian Cash balance equation is expressed as follows:

$$M = KPY$$

Here; M = Quantity of Money

K = represents that fraction of the real income which the Public desire to hold in the form of Money.

P = refers to the price level.

Y = Stands for aggregate real income.

(2) Pigou's Equation:

Pigou's Cash balance equation is as follows:

$$P = KR/M$$

Here; P = Value of Money

R = Total Real Income

K = That proportion of real income which is kept in Cash

M = The Quantity of Money

Pigou Extended this equation by dividing Cash into two Parts:

(1) Cash with the Public

& (11) Deposits with the banks; Pigou's Modified equation is as follows;

$$P = \frac{kR}{M}\left[c + h(1-c)\right]$$

Here, c = That Proportion of Cash which people keep with them

(1-c) = Bank Deposits

h = That portion of bank

deposits which is kept by banks as Cash.

Assuming k and R to be Constant.

(2) Robertson's Equation

$$M = KPT$$

$$\text{or; } P = \frac{M}{KT}$$

Here P = Price level

M = Quantity of Money

T = Total amount of goods & services during one year.

Keynes's Equation:

Keynes eqn; also known as Real Balance Equation. In an improvement over other Cambridge equation(s).

According to him, people hold cash to buy goods and services. Keynes has given the following equation:

$$n = P(k + rk') \text{ or;}$$

$$P = (n / k + rk')$$

where n = Cash held by the Public.

P = Price level of Consumers goods which people wish to keep cash

K = Real balance

r = Cash reserve ratio of the bank

k' = Real balance held in the form of bank Money.

If we assume k, k' and r as Constant change in 'n' causes Corresponding change in 'P'. In other words there is direct and Proportional relationship between n and P.